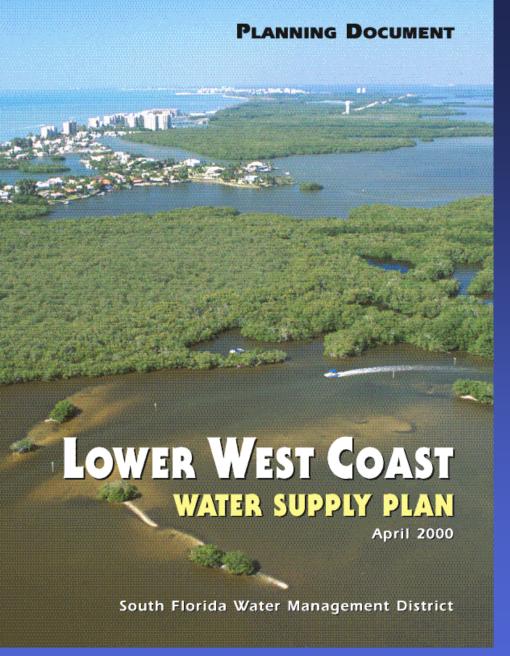
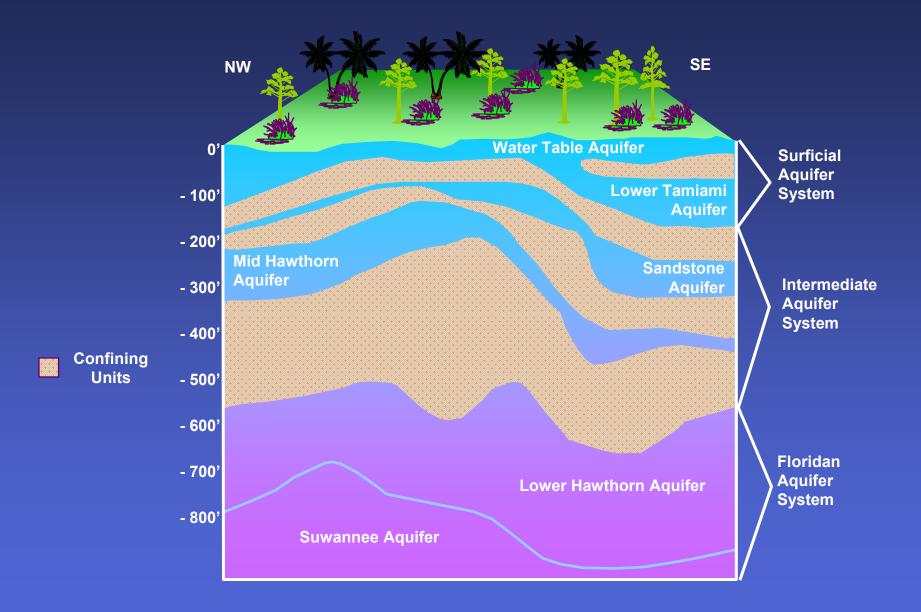
Overview of **2000 Lower West Coast Water Supply Plan**

Mark Elsner, P.E. Water Supply Department



- 5,130 square miles
- Planning horizon 2020
- Population was projected to increase 70 percent to almost 1 million
- 10% increase in agricultural acreage to 260,000 acres was projected
- 30% increase in overall water demands to1,100 MGD was anticipated

Lower West Coast Generalized Cross-Section



Advisory Committee

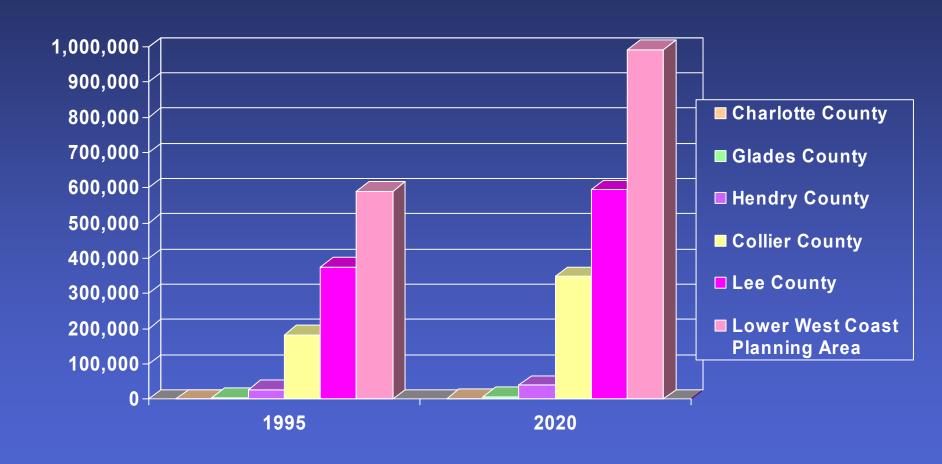


The 2000 LWCWSP Process Major Components

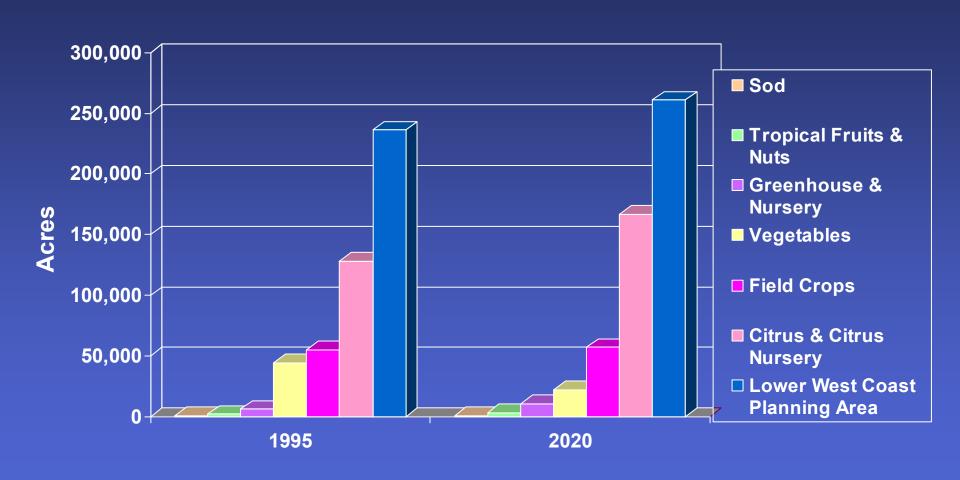
- 1. Water Use Assessment
- 2. Analysis and Issue Identification
- 3. Water Source Options
- 4. Conclusion/Recommendations

Water Use Assessment

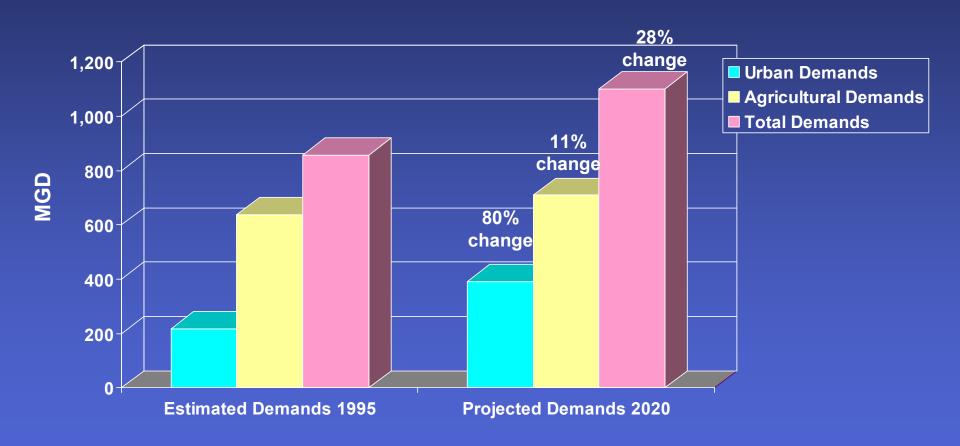
The population in the Lower West Coast was projected to increase by 70 percent through 2020



Agricultural acreage in the Lower West Coast was projected to increase by 10 percent through 2020



While agriculture was the largest user, urban water use was anticipated to have the highest percent increase in the Lower West Coast



Analysis and Issue Identification

Several methods and sources were used during Analysis and Issue Identification

- Reviewed 1994 Lower West Coast Water Supply Plan results
- Reviewed Consumptive Use Permitting activities and related data since 1994
- Extensive review and input from advisory committee
- Data and results from Caloosahatchee Water Management Plan

Several issues were identified in the LWC Planning Area

- Limited expansion of fresh water aquifers
 - Wetland impacts
 - Saltwater intrusion
 - Aquifer protection
- Limited fresh water for irrigation
- Surface water availability in C-43 Canal
- Freshwater discharges to estuaries

Water Source Options

Conservation

Reclaimed Water

Ground Water - Fresh



Surface Water

Regional Irrigation System WATER SUPPLY DEVELOPMENT OPTIONS

Storage

Ground Water - Saline

Seawater

Conclusion

The needs of the region can be met with appropriate management and diversification of water supply sources.

Recommendations

Recommendations Contain Regional and Local Responsibilities

- Water Resource Development
 - Water management district takes lead
 - Regional in nature

- Water Supply Development
 - Local responsibility
 - Local projects

Conservation

- Develop comprehensive Water Conservation Program
- Support existing mobile irrigation laboratories and establishment of additional labs

Ground Water Resources

Surficial and Intermediate Aquifer Systems

- Continue existing monitoring program and enhance where appropriate
- Conduct regional modeling no later that the five-year update to this Plan

Ground Water Resources (cont.)

Floridan Aquifer

- Develop regional model and conduct analysis
- Continue and expand existing monitoring program
- Develop Floridan Aquifer Data Partnerships
- Explore alternative desalination concentrate disposal options

Reclaimed Water

Reclaimed water recommendations incorporated into Regional Irrigation System

Regional Irrigation System

Conduct Regional Irrigation System Feasibility Study

Seawater

 Concluded that seawater is a potential source of water, but in 2000, was not costeffective

Storage

Aquifer Storage and Recovery

- Continue to work with agency on water quality requirements
- Conduct rulemaking to address use of Floridan aquifer for ASR and water use

Regional and Local Retention

- Consider funding for retention projects that increase water availability
- Evaluate injection of surface water and other sources for saltwater intrusion barrier

Storage (cont.)

Reservoirs

Incorporated into Surface Water source option

Surface Water

- Complete Southwest Florida Feasibility Study
- Conduct Caloosahatchee River ASR Pilot project
- Construct C-43 Storage Project
- Develop and adopt minimum flow and level for Caloosahatchee Estuary

Related Strategies

- Incorporate assumptions into permitting
 - 1-in-10 level of certainty
 - Resource protection criteria
 - Water shortage triggers
 - Saltwater intrusion
 - Special designations
 - Permit duration
- Establish MFL for Caloosahatchee River and Estuary, and LWC Aquifer System
- Continue Wetland Drawdown Study



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